

Abstract of the Disclosure

Provided is a magnetoresistance device. The device includes a substrate, a lower layer formed on the substrate, and a magnetoresistance structure formed on the lower layer, and the lower layer is formed of amorphous Zr_xAl_{1-x} ($0 < x < 1$) or $Zr_xAl_{1-x}O_y$ ($0 < x < 1$, $0 < y < 1$). In a tunneling magnetoresistance (TMR) device, a tunneling barrier layer is formed of at least one selected from the group consisting of $Zr_xAl_{1-x}O_y$ ($0 < x < 1$, $0 < y < 1$), $Ti_xAl_{1-x}O_y$ ($0 < x < 1$, $0 < y < 1$), and $Nb_xAl_{1-x}O_y$ ($0 < x < 1$, $0 < y < 1$).

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